

WHAT IS CLAIMED IS:

1. A method of connecting fibers, comprising:

combining a plurality of fibers into a fiber  
bundle; and

5 connecting each one end of said plurality of  
fibers to an end of a single-core fiber having a larger  
core diameter than the fibers, the fibers having  
different directions and characteristics at different  
positions connected with the single-core fiber.

10 2. A method of connecting fibers according to  
claim 1, wherein each of said plurality of fibers  
forming the fiber bundle is directed at an angle toward  
the center axis of the single-core fiber.

15 3. A method of connecting fibers according to  
claim 1, wherein each end of said plurality of fibers  
forming the fiber bundle, which end is connected to the  
single-core fiber, has a cross section at an angle.

20 4. A method of connecting fibers according to  
claim 1, wherein said plurality of fibers forming the  
fiber bundle are three fibers for a red laser, a blue  
laser and a green laser, respectively.

25 5. A method of connecting fibers according to  
claim 1, wherein said plurality of fibers forming the  
fiber bundle are entered by light beams at different  
angles of incidence in such a manner that the exit  
light beam of the outer fibers of the bundle assumes  
a low-order mode and the exit light beam of the inner

fiber of the bundle assumes a higher order of mode than the outer fibers of the low-order mode.

6. A method of connecting fibers according to claim 1, wherein said plurality of fibers forming the fiber bundle are such that the outer fibers of the bundle have a low numerical aperture and the inner fiber of the bundle has a higher numerical aperture than the outer fibers having a low numerical aperture.

7. A laser apparatus comprising:  
10           a plurality of laser generators; and  
              a group of fibers including a plurality of fibers connected to each of the laser generators and a single-core fiber connected to a fiber bundle including said plurality of fibers and having a larger core diameter  
15           than the fibers,

              wherein said plurality of fibers have different directions and characteristics in accordance with the position connected.

8. A laser apparatus according to claim 7,  
20           wherein each of said plurality of fibers forming the fiber bundle is directed at an angle toward the center axis of the single-core fiber.

9. A laser apparatus according to claim 7,  
              wherein each of the ends of said plurality of fibers  
25           forming the fiber bundle, which ends are connected to the single-core fiber, has a cross section at an angle.

10. A laser apparatus according to claim 7,

wherein said plurality of fibers forming the fiber bundle are three fibers irradiated with a red laser, a blue laser and a green laser, respectively, by the laser generators.

5       11. A laser apparatus according to claim 7,  
wherein said plurality of fibers forming the fiber  
bundle are entered by light beams at different angles  
of incidence so that the exit light beams from the  
outer fiber of the bundle have a low-order mode and the  
10      exit light beam from the inner fiber of the bundle has  
a higher order of mode than the outer fiber having a  
low order mode.

12. A laser apparatus according to claim 7,  
wherein said plurality of fibers forming the fiber  
15      bundle are such that the outer fibers of the bundle  
have a low numerical aperture and the inner fiber of  
the bundle has a higher numerical aperture than the  
outer fibers having a low numerical aperture.

13. A projection television comprising:  
20      a light source including a plurality of laser  
generators, a plurality of fibers connected to each of  
the laser generators, and a single-core fiber connected  
to a fiber bundle formed of said plurality of fibers  
and having a larger core diameter than the fibers, said  
25      plurality of fibers having different directions and  
different characteristics in accordance with the  
position connected; and

a display for displaying an image based on the video information supplied thereto, using the light radiated from the light source.

14. A projection television according to claim 13,  
5 wherein each of said plurality of fibers forming the fiber bundle is directed at an angle toward the center axis of the single-core fiber.

15. A projection television according to claim 13,  
wherein each end of said plurality of fibers forming  
10 the fiber bundle, which end is connected to the single-  
core fiber, has a cross section at an angle.

16. A projection television according to claim 13,  
wherein said plurality of fibers forming the fiber  
bundle are three fibers for a red laser, a blue laser  
15 and a green laser, respectively.

17. A projection television according to claim 13,  
wherein said plurality of fibers forming the fiber  
bundle are entered by light beams at different angles  
of incidence in such a manner that the exit light beam  
20 of the outer fibers of the bundle assumes a low-order  
mode and the exit light beam of the inner fiber of the  
bundle assumes a higher order of mode than the outer  
fibers of the low-order mode.

18. A projection television according to claim 13,  
25 wherein said plurality of fibers forming the fiber  
bundle are such that the outer fibers of the bundle  
have a low numerical aperture and the inner fiber of

the bundle has a higher numerical aperture than the outer fibers having a low numerical aperture.